

## **The NUS Medical Signpost on the Internet**

**Lun K C, Loke E, Tan E L, Chan F K, Lee Y N and Tan T W**  
**Faculty of Medicine and Internet Research and Development Unit**  
**National University of Singapore**

The National University of Singapore (NUS) is one of the first medical schools in Asia to exploit internet technology for healthcare. As early as September 1993, it set up its first World Wide Web site ([biomed.nus.sg](http://biomed.nus.sg)) which offered a number of value-added information databases. Since then, NUS has established and helped to establish no fewer than forty medical websites, making Singapore arguably the country with the 'highest medical websites per capita' in the world. Some of these major websites were featured recently at MEDWEB '96, Singapore's First Medical WWW Conference.

The Faculty of Medicine launched Cyberspace Hospital, one of the first virtual hospitals on the Internet on May 1, 1995. Cyberspace Hospital provides a one-stop access to global health information resources on the Internet using a virtual hospital setting. The hyperlinks to information resources are embedded within 'service and specialist departments' located on several 'floors' of the virtual hospital. Within each department, the links are organized into (a) newsgroups, giving users the ability to access and interact with new groups dedicated to a particular medical specialty, (b) on-line electronic journals and newsletters, allowing users to browse medical journals which have partly or wholly gone electronic and (c) websites, providing selective access to information resources worldwide. Extensive links to health educational resources on the Internet are provided in the Health Education Department on Level 2 while the Singapore Room provides information resources on health and healthcare services in Singapore. As of May 1, 1996, Cyberspace Hospital had been accessed by over 30,000 individuals from 80 countries worldwide.

A Cybermedical School was added on December 25, 1995 to cater to the educational needs of medical students worldwide. Cybermed evolved from the Cyberspace Hospital Student Center which was established at the suggestion of a University of Pennsylvania medical student who felt that the virtual hospital should also cater to the information needs of the medical student community. Presently, Cybermed holds an extensive repository of clinical notes and tutorials.

On March 9, 1996, the NUS signed an agreement with the National Library of Medicine, USA to establish the first official mirror of the Visible Human Project in the Far East, making it easier for Asian users to access the large image repositories of the Visible Man and Woman. Already, a 3-D browser for the male is being developed in VRML and a project to provide multilingual labels to the images for viewing on multilingual WWW browsers is being planned.

A 3-dimensional version of Cyberspace Hospital was launched on April 1, 1996, earning it the reputation of the first virtual reality hospital on the Internet. 3-D Cyberspace Hospital offers visitors the sensation of walking through a hospital building while, at the same time, providing him with the full information services of the 2-D (html) version. At various locations of the virtual hospital building are doors which provide the interface to the various service and specialist departments of the 2-D hospital.

Directions to these websites are given by the National University of Singapore's Medical Signpost on the Internet located at <http://ch.nus.sg> in cyberspace.